DRAFT FINDING OF NO SIGNIFICANT IMPACT

Personal Watercraft Use

Curecanti National Recreation Area

The National Park Service (NPS) has prepared an environmental assessment (EA) that evaluates a range of alternatives and strategies for the management of personal watercraft (PWC) use at Curecanti National Recreation Area in order to ensure the protection of park resources and values while offering recreational opportunities as provided for in the park's enabling legislation, purpose, mission, and goals. The Environmental Assessment was prepared in accordance with the National Environmental Policy Act of 1969 (NEPA). NPS is taking action to adopt special regulations to manage or discontinue PWC use within park units.

In May 1998 the Bluewater Network filed a petition urging the NPS to initiate a rulemaking process to prohibit PWC use throughout the national park system. In response to the petition, the NPS issued an interim management policy requiring superintendents of parks where PWC use can occur but had not yet occurred to close the unit to such use until the rule was finalized. The Park Service envisioned the servicewide regulation as an opportunity to evaluate impacts from PWC use before authorizing the use. On March 21, 2000, the NPS issued a regulation prohibiting PWC use in most units and required 21 units, including Curecanti National Recreation Area, to determine the appropriateness of continued PWC use.

In response to the PWC final regulation, Bluewater Network sued the NPS, challenging the National Park Service's decision to allow continued PWC use in 21 units while prohibiting PWC use in other units. In response to the suit, the NPS and the Bluewater Network negotiated a settlement. While 21 units could continue PWC use in the short-term, each of those parks desiring to continue long-term PWC use would promulgate a park-specific special regulation. In addition, the settlement stipulates that the NPS must base its decision to issue a park-specific special regulation to continue PWC use through an environmental analysis conducted in accordance with the National Environmental Policy Act. The NEPA analysis at a minimum, according to the settlement, must evaluate PWC impacts on water quality, air quality, soundscapes, wildlife, wildlife habitat, shoreline vegetation, visitor conflicts, and visitor safety.

On November 6, 2002, PWC use was discontinued at Curecanti National Recreation Area. Since PWC use was discontinued, Curecanti National Recreation Area has identified a preferred alternative that reinstates PWC use under a special regulation with additional modifications.

The purpose of the EA was to evaluate the effects of authorizing a special regulation to address the use of PWC within the park boundaries. Three alternatives concerning the use of PWC at Curecanti National Recreation Area were evaluated, which included two alternatives to continue PWC use under certain conditions: alternative A would reinstate PWC use under a special regulation as previously managed with additional modifications, and alternative B would reinstate PWC use under a special

regulation with additional management prescriptions. In addition, a no action alternative was considered that would discontinue all PWC use within the national recreation area.

PREFERRED ALTERNATIVE

The NPS preferred alternative is modified alternative A. Alternative A was modified after extensive review of the environmental analysis and public comment, and to provide additional resource protection for the Gunnison sage grouse, a special status species. This alternative allows for the continued use of PWC within the national recreation area boundary with additional modifications. With the adoption of the special regulation under alternative A, PWC use will be allowed as follows.

Areas of Use / Location Restrictions. Locational restrictions include the following.

PWC use will be reinstated in all locations of the recreation area where it was allowed until November 6, 2002. As prescribed by Curecanti's *General Management Plan* and the *Superintendent's Compendium*, PWC use will occur in areas of Blue Mesa Reservoir and portions of the lake arms. Areas appropriate for PWC use would include Sapinero, Cebolla and Iola Basins; Bay of Chickens; Dry Creek; Elk Creek; the Highway 149 area; and Lake Fork, Soap Creek, Cebolla, and West Elk arms.

Operation of all motorized watercraft will continue to be prohibited in areas east of Beaver Creek within the Gunnison River Canyon and in the area downstream from the East Portal diversion dam. The following areas will remain closed to all boating, including personal watercraft, and shoreline entry:

- Blue Mesa Dam downstream for 225 yards
- Morrow Point Dam downstream for 130 yards
- Crystal Dam downstream for 700 yards
- East Portal diversion dam upstream for 60 yards
- Buoyed barricaded sections in vicinity of dams

Personal watercraft will continue to abide by the horsepower limitations (25 hp) in Morrow Point and Crystal Reservoirs.

Launch Restrictions. All designated launch areas on Blue Mesa Reservoir (developed and unimproved) will remain open to PWC use. Personal watercraft will be allowed to land on any shoreline at Blue Mesa Reservoir.

Speed and Wake Restrictions. The state of Colorado regulations allow motorized vessels such as personal watercraft to operate at speeds up to 40 mph, except where restricted.

The state of Colorado defines "wake" to mean a movement of the water created by a boat underway, great enough to disturb a boat at rest, but under no circumstances would a boat underway exceed 5 mph while in a posted no-wake area. On bodies of water within the state of Colorado, the term "above a no-wake speed" means operating a vessel at such speed as to create a wake. The current draft of 36 CFR 3 defines "flat-wake speed" as minimal disturbance of the water by a vessel in order to prevent damage or injury.

At Curecanti, the following areas will be zoned as flat-wake speed areas for all vessels:

- The area upstream from Lake City Bridge to Beaver Creek;
- The area within the arms of Blue Mesa Reservoir that is less than 1,000 feet from shore to shore at full pool level. These areas will be marked by buoys. These arms include Soap Creek Arm, West Elk Arm, Lake Fork Arm, and Cebolla Arm;
- Narrow waterways off the Bay of Chickens and Dry Creek;
- Elk Creek and Lake Fork Marinas and Iola, Stevens Creek boat launch area.

In addition to the areas outlined above, a 100-foot buffer zone from the shoreline will be established at the Stevens Creek campground, as marked by buoys. The buffer area will be zoned as a flat-wake speed area. A buffer zone is necessary for the protection of an active Gunnison sage grouse lek and nesting area, and will mitigate potential noise impacts from PWC use and associated shoreline use during the lek and nesting season (mid-March to July).

Safety / Operating Restrictions. All state and federal watercraft laws and regulations will continue to be enforced, including regulations that address reckless or negligent operation, excessive speed, hazardous wakes or washes, hours of operation, age of driver, and distance between vessels. Specifically, the state requires that vessels passing within 150 feet of any swimming area, moored vessel, person on shore engaged in fishing, or person in a vessel engaged in servicing buoys or markings, reduce speed in order to prevent wash or wake of the vessel from causing damage or inconvenience. In addition, the state requires all PWC riders to wear personal floatation devices and a lanyard cutoff switch, if installed.

PWC operators on waters within the state of Colorado must be at least 16 years old. However, children 14 and 15 years of age may operate a personal watercraft after completing a mandatory boat safety course. Operation of personal watercraft from one-half hour after sunset to one-half hour before sunrise is prohibited. State regulations do not allow personal watercraft to exceed 40 mph except during authorized race events, and except for patrol vessels operating in emergencies.

Additionally, Colorado state law defines rider operation as careless and reckless when:

- jumping a vessel's wake at an unsafe distance;
- jumping another vessel's wake when visibility around the vessel is obstructed;
- weaving unsafely through vessel traffic; or
- operating at such a speed and proximity to another vessel that either vessel must swerve or cut speed to avoid a collision.

Equipment and Emission Restrictions. The Environmental Protection Agency promulgated a rule to control exhaust emissions from new marine engines, including outboards and personal watercraft. Emission controls provide for increasingly stricter standards beginning in model year 1999. Under this alternative, it is assumed that PWC carbureted engines would be converted to cleaner two-stroke or four-stroke engines in accordance with the Environmental Protection Agency's Rule (40 CFR Parts

89-91, “Air Pollution Control; Gasoline Spark-Ignition and Spark-Ignition Engines, Exemptions; Rule, 1996). It is the responsibility of the PWC industry to meet these regulations, not the responsibility of individual owners. However, as owners replaced their personal watercraft, cleaner engines that comply with EPA regulations would be available for purchase.

Education. A voluntary user education program would be established and include interpretive talks, on-site bulletins, brochures to PWC registrants, and visitors who rent personal watercraft.

ADDITIONAL ALTERNATIVES CONSIDERED

As noted above, the EA evaluated three alternatives concerning the use of personal watercraft at Curecanti National Recreation Area:

- *Alternative A* would reinstate the PWC policies that existed prior to November 6, 2002, when PWC use was permitted under the current Superintendent’s Compendium with additional modifications. This alternative has been identified as the preferred alternative.
- *Alternative B* allows for the continued use of PWC with additional management prescriptions.
- *No action alternative* would discontinue all PWC use within the national recreation area.

ENVIRONMENTALLY PREFERRED ALTERNATIVE

The environmentally preferred alternative is determined by applying the criteria suggested in the National Environmental Policy Act of 1969, which is guided by the Council on Environmental Quality (CEQ). The CEQ provides direction that “[t]he environmentally preferable alternative is the alternative that will promote the national environmental policy as expressed in NEPA’s Section 101”:

- fulfill the responsibilities of each generation as trustee of the environment for succeeding generations;
- assure for all generations safe, healthful, productive, and aesthetically and culturally pleasing surroundings;
- attain the widest range of beneficial uses of the environment without degradation, risk of health or safety, or other undesirable and unintended consequences;
- preserve important historic, cultural and natural aspects of our national heritage and maintain, wherever possible, an environment that supports diversity and variety of individual choice;
- achieve a balance between population and resource use that will permit high standards of living and a wide sharing of life’s amenities; and
- enhance the quality of renewable resources and approach the maximum attainable recycling of depletable resources.

The environmentally preferred alternative is alternative B. Alternative B will satisfy the majority of the six requirements detailed above. In the long term, this alternative will help visitors enjoy a beneficial use by allowing access to national recreation area amenities by PWC users while accommodating passive outdoor recreationists and meeting resource management objectives. This alternative will accommodate recreational opportunities for visitors while protecting sensitive natural

resources. Alternative B is designed to meet NPS's general prohibition on PWC use for the protection of park resources and values while providing recreational opportunities for PWC users.

Based on the analysis prepared for PWC use at Curecanti National Recreation Area, alternative B is considered the environmentally preferred alternative by best fulfilling park responsibilities as trustee of sensitive habitat; by ensuring safe, healthful, productive, and aesthetically and culturally pleasing surroundings; and by attaining a wider range of beneficial uses of the environment without degradation, risk of health or safety, or other undesirable and unintended consequences.

WHY THE PREFERRED ALTERNATIVE WILL NOT HAVE A SIGNIFICANT EFFECT ON THE HUMAN ENVIRONMENT

As documented in the EA, the NPS has determined that the preferred alternative (alternative A as modified) can be implemented with no significant adverse effects to water quality, air quality, soundscapes, wildlife and wildlife habitat, threatened, endangered, or special concern species, shoreline vegetation, visitor experience, visitor safety, cultural resources, the socioeconomic environment, and national recreation area operations and management. As defined in 40 CFR §1508.27, significance is determined by examining the following criteria:

Impacts that may be both beneficial and adverse: The settlement between NPS and Bluewater Network requires the NEPA analysis to evaluate PWC impacts to water quality, air quality, soundscapes, wildlife and wildlife habitat, shoreline vegetation, visitor conflicts, and visitor safety. PWC with two-stroke engines discharge a gas-oil mixture, which consists of hydrocarbons and polycyclic aromatic hydrocarbons, into the water, resulting in adverse effects on water quality. At Curecanti National Recreation Area, hydrocarbon discharges to water are expected to decrease considerably over the next ten years due to mandated improvements in engine technology.

The 2002 and 2012 threshold volumes to meet ecotoxicological benchmarks for water quality are extremely small in relation to the volumes of water available, indicating that these pollutant loads will result in concentrations well below the ecotoxicological benchmarks. Consequently, negligible to minor adverse impacts to water quality are expected in 2002 and in 2012. Impacts to human health from PWC would be negligible adverse for all airborne pollutants due to improved engine technology. Minor adverse impacts to air quality from PWC would be expected in 2002 and 2012.

Personal watercraft noise may be more disturbing than other motorized vessels because of rapid changes in acceleration and direction of noise. Alternative A will result in a reduction in noise levels in the areas where speed restrictions will be added. Minor impacts are expected when use is occasional and distanced from other park users, and moderate impacts are expected from concentrated use near Elk Creek. Impacts will generally be short-term, although could periodically be longer-term at shoreline areas on the very high use days, where motorized noise may predominate off and on for most of the day. The lake arms and buffer zones will have speed and wake restrictions that will provide beneficial improvements to the soundscape values.

A 100-foot buffer zone will be established for Gunnison sage grouse habitat on the northern shore of the main body at Stevens Creek. The establishment of the buffer zone will potentially have beneficial impacts to special status species, particularly the Gunnison sage grouse. Additional speed and wake restrictions will be implemented in the lake arm areas, decreasing the likelihood of adverse impacts and benefiting wildlife, waterfowl, special status species, and other species along the shoreline of the

lake arms. The existing resource monitoring program will provide a check on future increases in PWC use. The restrictions implemented under this alternative will result in beneficial impacts to wildlife and wildlife habitat. All wildlife impacts will be temporary and short term.

Potential impacts to vegetation from PWC use include short-term wave action and trampling as a result of PWC operators accessing and walking on the shore. Because vegetation is generally lacking along many shoreline areas, PWC use would result in only negligible, short-term adverse impacts. The primary location of lush riparian vegetation is in more inland and narrow areas of the lake arms. However, these areas would be designated flat-wake speed areas to minimize disturbance from PWC and other activities, resulting in negligible, adverse impacts.

PWC management strategies, such as shoreline zoning, will have negligible impacts on most PWC users, because most of the popular PWC use locations at the park will remain available for use. Some PWC users will experience short-term, minor adverse impacts due to speed restriction in the lake arms, but overall PWC users will experience a long-term, negligible to minor adverse impact due to additional wake restriction buffers. Non-motorized and motorized boaters using the lake arms will experience beneficial impacts due to the wake restrictions. Shoreline users, those seeking more natural surroundings, and visitors using the main body will experience negligible to minor adverse impacts.

Degree of effect on public health or safety: Implementation of the preferred alternative will result in negligible to moderate effects on public health and safety. The preferred alternative will have negligible to minor adverse impacts to water quality for all human health and ecotoxicological benchmarks analyzed. Impacts to air quality for carbon monoxide and other pollutants of concern will be negligible and adverse. The preferred alternative will maintain existing air quality conditions and will not result in an impairment of air quality.

Restricting PWC speeds in the popular lake arms could result in PWC operators using other areas of the reservoir to recreate at higher speeds. However, swimmers in the lake arms will experience a slight benefit from PWC operators having speed restrictions in these areas. Non-motorized boaters and those boaters seeking the calmer waters of the new speed-zoned areas will experience a beneficial impact on visitor safety. Short- and long-term, minor to moderate adverse impacts to visitor safety is expected in the high use areas and boat launches.

***Unique characteristics of the geographic area such as proximity to historic or cultural resources, park lands, wetlands, wild and scenic rivers, or ecologically critical areas*:** The preferred alternative will not impact unique characteristics of the area including park lands, prime farmlands, or wild and scenic rivers because these resources do not exist in the project area.

Wetlands make up a very small portion of overall vegetation community types and are located primarily along stream courses, including the Gunnison River and associated tributaries. The Cooper Ranch/Neversink area along the Gunnison River, above Blue Mesa Reservoir, is unique and valuable due to riparian and wetland communities. However, there are no substantial wetlands in areas of PWC use or areas that are easily accessible to personal watercraft. Personal watercraft can access the Cooper Ranch/Neversink wetlands via the Gunnison River above Beaver Creek; however, this access is illegal.

Degree to which effects on the quality of the human environment are likely to be highly controversial: As discussed earlier, the EA was written under NEPA as a result of a settlement between the NPS and Bluewater Network. The impetus of the lawsuit was the result of studies in

Everglades National Park on PWC use. Studies showed that PWC use resulted in damage to vegetation, adversely impacted shorebirds, and disturbed the life cycles of other wildlife.

There were no other highly controversial effects identified during either preparation of the EA or the public comment period.

Degree to which the possible effects on the quality of the human environment are highly uncertain or involve unique or unknown risks: No highly uncertain, unique or unknown risks were identified during either preparation of the EA or the public comment period.

Degree to which the action may establish a precedent for future actions with significant effects or represents a decision in principle about a future consideration: The preferred alternative neither establishes a National Park Service precedent for future actions with significant effects nor represents a decision in principle about a future consideration.

Whether the action is related to other actions with individually insignificant but cumulatively significant impacts: Cumulative effects were analyzed in the EA, and no significant cumulative impacts were identified.

Degree to which the action may adversely affect districts, sites, highways, structures, or objects listed on National Register of Historic Places or may cause loss or destruction of significant scientific, cultural, or historical resources: Surveys in the area of Blue Mesa Reservoir identified ten sites, with eight below the proposed high water line behind the Blue Mesa Dam that were believed to reflect short term occupations by nomadic Indian groups. Surveys undertaken in 1976 identified another 130 archeological sites, most within the vicinity of Blue Mesa Reservoir. Examinations in the late 1970s uncovered additional features, including the remains of an isolated hearth dated to approximately 8,000 B.C. In 1981 the Curecanti Archeological District was nominated to the National Register of Historic Places. A mix of new sites, isolated finds, and previously recorded sites were inventoried during construction-related research projects conducted between 1980 and 1984, and again between 1991 and 1992. Two formerly unrecorded sites were added to the Curecanti Archeological District nomination. However, according to park staff, looting and vandalism of cultural resources is not a substantial problem. A direct correlation of impacts attributed to PWC users is difficult to draw, since many of these areas are also accessible to backcountry hikers or other watercraft users. No cultural resources or sites sacred to American Indians or other significant ethnographic resources will be affected by the preferred alternative. No adverse effects are expected to archeological, historic, ethnographic, or cultural landscape resources currently identified as eligible for or listed on the National Register of Historic Places under this alternative. A letter was sent to the Colorado State Historic Preservation Office (SHPO) regarding the proposed project on June 9, 2003, but no response was received within 30 days of the date of the letter. A SHPO representative was called on March 11, 2004, who confirmed SHPO's concurrence with the EA. Therefore, compliance with Section 106 of the National Historic Preservation Act was completed on March 11, 2004.

Degree to which the action may adversely affect an endangered or threatened species or its critical habitat: Consultation under Section 7 of the Endangered Species Act was conducted to determine if any threatened or endangered species exist within Curecanti National Recreation Area. According to a letter from the U.S. Fish and Wildlife Service dated October 16, 2002, the following five federally listed or candidate species could be potentially affected by a special regulation providing for continued PWC use on the flat-wake speed portions of Blue Mesa Reservoir: bald eagle (threatened), southwestern willow flycatcher (endangered), yellow-billed cuckoo (candidate), Canada lynx

(threatened), and boreal toad (candidate). No critical habitat was identified within 200 feet of the shore.

The federally listed species mentioned above (with the exception of the yellow-billed cuckoo) are also given special status by the state. Other state listed species that may potentially be affected by the action at Curecanti include the greater Sandhill crane, Gunnison sage grouse, American peregrine falcon, and long-billed curlew. One state-listed (threatened) species that is protected is the Colorado River cutthroat trout, which is also federally listed as threatened. However, USFWS did not include any fish species in their list of federally listed species potentially affected by PWC management actions. Of the species listed by both the USFWS and the Colorado Wildlife Commission, only the Gunnison sage grouse has habitat near the shoreline of Curecanti National Recreation Area.

Under alternative A, PWC use in Curecanti National Recreation Area may affect, but is not likely to adversely affect, the federally or state listed bald eagle, yellow billed cuckoo, American peregrine falcon, skiff milkvetch, and Gunnison milkvetch. The establishment of PWC-restricted buffer zones in the area of Steven's Creek will potentially have beneficial impacts to threatened and endangered species and other special status species, particularly the Gunnison sage grouse. There will be no effect to all other federal or state-listed species, and no likely effects to park sensitive species. The U.S. Fish and Wildlife Service concurred with the determinations on May 25, 2005.

Implementation of the proposed action will not adversely affect federally listed threatened, endangered or special concern species in Curecanti National Recreation Area.

Whether the action threatens a violation of federal, state, or local environmental protection law: The preferred alternative violates no federal, state, or local environmental protection laws.

IMPAIRMENT OF PARK RESOURCES OR VALUES

In addition to reviewing the list of significance criteria, NPS staff determined that implementation of the preferred alternative will not constitute an impairment of the park's resources and values. This conclusion is based on a thorough analysis of the impacts described in the EA, agency and public comments received, and professional judgement in accordance with the National Park Service's *Management Policies, 2001* (December 27, 2000). As described in the EA, implementation of the preferred alternative will not result in major, adverse impacts to a resource or value whose conservation is (1) necessary to fulfill specific purposes identified in the establishing legislation or proclamation of Curecanti National Recreation Area; (2) key to the natural or cultural integrity of the park or to opportunities for enjoyment of the park; or (3) identified as a goal in the park's general management plan or other relevant National Park Service planning documents.

PUBLIC INVOLVEMENT

The National Park Service published a notice of the availability and the proposed rule in the Federal Register on March 17, 2006 (71 FR 13792). The public was invited to comment on the EA for an approximate 30-day comment period that lasted from June 11 to July 13, 2003, and on the rulemaking from March 17, 2006 to May 16, 2006. The National Park Service received approximately 2325 comment letters regarding the proposed regulation. Five substantive comments were received that required changes to the EA. The substantive comments are included in the attached Errata Sheets, along with changes to the EA text. A summary of Public Comments and Responses is also attached.

BASIS FOR DECISION

The preferred alternative does not constitute an action that normally requires preparation of an environmental impact statement (EIS). The preferred alternative will not have a significant effect on the human environment. Negative environmental impacts that could occur are negligible to moderate in intensity. There are no significant impacts on public health, public safety, threatened or endangered species, sites or districts listed in or eligible for listing in the National Register of Historic Places, or other unique characteristics of the region. No highly uncertain or controversial impacts, unique or unknown risks, significant cumulative effects, or elements of precedence were identified. Implementation of the action will not violate any federal, state, or local environmental protection law.

Based on the foregoing, it has been determined that an EIS is not required for this project and thus will not be prepared.

Recommended: _____ _____

William Wellman
Superintendent, Curecanti National Recreation Area

Date

Approved: _____ _____

Michael D. Snyder
Intermountain Regional Director

Date

CURECANTI NATIONAL RECREATION AREA

PERSONAL WATERCRAFT USE ENVIRONMENTAL ASSESSMENT

ERRATA

The following changes have been made to the *Personal Watercraft Use Environmental Assessment* for Curecanti National Recreation Area (April 2003) to modify the preferred alternative and its analysis, to address public comments, and to clarify text. Curecanti has chosen a modified alternative A as the preferred alternative. Alternative A was modified after extensive review of the environmental analysis and public comment, and to provide additional resource protection for the Gunnison sage grouse. Additions to the text are identified by underlines, and deletions are marked by strikeout.

SUMMARY

Text changes on page iv:

ALTERNATIVES CONSIDERED

This environmental assessment evaluates three alternatives concerning the use of personal watercraft at Curecanti.

- Alternative A would reinstate PWC use under a special regulation as previously managed with additional modifications. (The park has identified alternative A as the preferred alternative.)
- Alternative B would reinstate PWC use under a special regulation with additional management prescriptions. ~~(The park has identified alternative B as the preferred alternative.)~~
- The no-action alternative would allow no PWC use. No special rule would be promulgated.

Text changes on page vi:

TABLE A: SUMMARY OF THE IMPACT ANALYSIS

Impact Topic	Alternative A: Reinstate PWC Use under a Special Regulation as Previously Managed with Additional Modifications (Preferred Alternative)	Alternative B: Reinstate PWC Use under a Special Regulation with Additional Management Prescriptions ~~(Preferred Alternative)~~	No-Action Alternative: Allow No PWC Use

Impact Topic	Alternative A: Reinstate PWC Use under a Special Regulation as Previously Managed with Additional Modifications (Preferred Alternative)	Alternative B: Reinstate PWC Use under a Special Regulation with Additional Management Prescriptions ~~(Preferred Alternative)~~	No-Action Alternative: Allow No PWC Use
Wildlife and Wildlife Habitat	PWC use impacts: ~~Negligible~~ Minor adverse effects on fish, and ~~negligible to~~ minor to moderate impacts on waterfowl and other wildlife. Impacts to fish, wildlife and respective habitats would be temporary and short term. Cumulative impacts: ~~Minor~~ Moderate adverse effects on wildlife and wildlife would be temporary and short term.	PWC use impacts: Similar to alternative A except additional limitations on PWC use would slightly reduce impacts on wildlife. Expanded wake restrictions would result in a beneficial impact. Cumulative impacts: Same as alternative A.	PWC use impacts: Beneficial impact with elimination of interactions between PWC users and wildlife with potential increased use of these areas by wildlife and waterfowl. Cumulative impacts: Similar to alternative A except no PWC contribution to overall impacts to wildlife and wildlife habitat.

Text changes on page x:

CONTENTS

PURPOSE AND NEED

OBJECTIVES IN TAKING ACTION

WATER QUALITY

Comment: *Page 14, Water Quality, third bullet: Suggest the word "drinking" be deleted. Colorado's standards for stream and reservoir water quality within the CNRA are not "drinking water" standards.*

U.S. Department of the Interior, CURE 0030, B.

Response: Comment noted and changed as shown below. "Human health based water quality standards" are more thoroughly described on pages 52 and 53 of the EA.

Text changes on page 14: Manage PWC emissions so that Curecanti National Recreation Area continues to meet state of Colorado ~~drinking water standards~~ human health based water quality standards.

ALTERNATIVES

Text changes on pages 25-27:

ALTERNATIVE A: REINSTATE PWC USE UNDER A SPECIAL REGULATION AS PREVIOUSLY MANAGED <u>WITH ADDITIONAL MODIFICATIONS</u> <u>(PREFERRED ALTERNATIVE)</u>

PWC use would be reinstated on Blue Mesa Reservoir through a special regulation and would be managed consistent with management strategies, as outlined in the *Superintendent's Compendium* (NPS 2002g) and in applicable state regulations in effect until November 6, 2002. The following summarizes the provisions of alternative A. Refer to the alternative A map (map 2) for specific locations mentioned in the text.

Comment: *Page 13801, §7.51 Curecanti Recreation Area, (d) Personal Watercraft (PWC), (1)*: *This condition (PWC use on Blue Mesa Reservoir) needs to be reworded to make it clear that PWC use and landing along the shoreline is subject to any restrictions or closures that may currently be in place or that may be put in place in the future, particularly with regard to closures/restrictions on public use in the vicinity of and upstream of Blue Mesa dam.*

This condition states that PWC may operate on Blue Mesa Reservoir and land on the shoreline anywhere between Beaver Creek and Blue Mesa Dam. This is contrary to boating restrictions and closures in the vicinity of the dam for public safety and/or dam security. While other provisions of 36 CFR (particularly, 1.5(f) and 3.6(c)) address closures/restrictions and violation thereof, this condition as currently worded, appears to modify these more general requirements. [Note: The discussion of PWC and other boating closures on page 13794 did not include any discussion of closures or restrictions on the upstream side of Blue Mesa, Morrow Point, and Crystal dams.]

Alan Schroder, CURE 0058.

Response: Text will be added per the errata to discuss buoyed barricaded sections in the vicinity of the dams, where boats are not allowed.

Text changes on page 25:

Areas of Use

Operation of all motorized watercraft will continue to be prohibited in areas east of Beaver Creek within the Gunnison River Canyon and in the area downstream from the East Portal diversion dam. The following areas will remain closed to all boating, including personal watercraft, and shoreline entry:

- Blue Mesa Dam downstream for 225 yards
- Morrow Point Dam downstream for 130 yards
- Crystal Dam downstream for 700 yards
- East Portal diversion dam upstream for 60 yards
- <u>Buoyed barricaded sections in vicinity of the dams</u>

Speed Zone and Wake Restrictions. The state of Colorado regulations allow motorized vessels such as personal watercraft to operate at speeds up to 40 mph, except where restricted.

The state of Colorado defines "wake" to mean a movement of the water created by a boat underway, great enough to disturb a boat at rest, but under no circumstances would a boat underway exceed 5 mph while in a posted no-wake area. On bodies of water within the state of Colorado, the term "above a no-wake speed" means operating a vessel at such speed as to create a wake. The current draft of 36 CFR 3 defines "flat-wake speed" as minimal disturbance of the water by a vessel in order to prevent damage or injury.

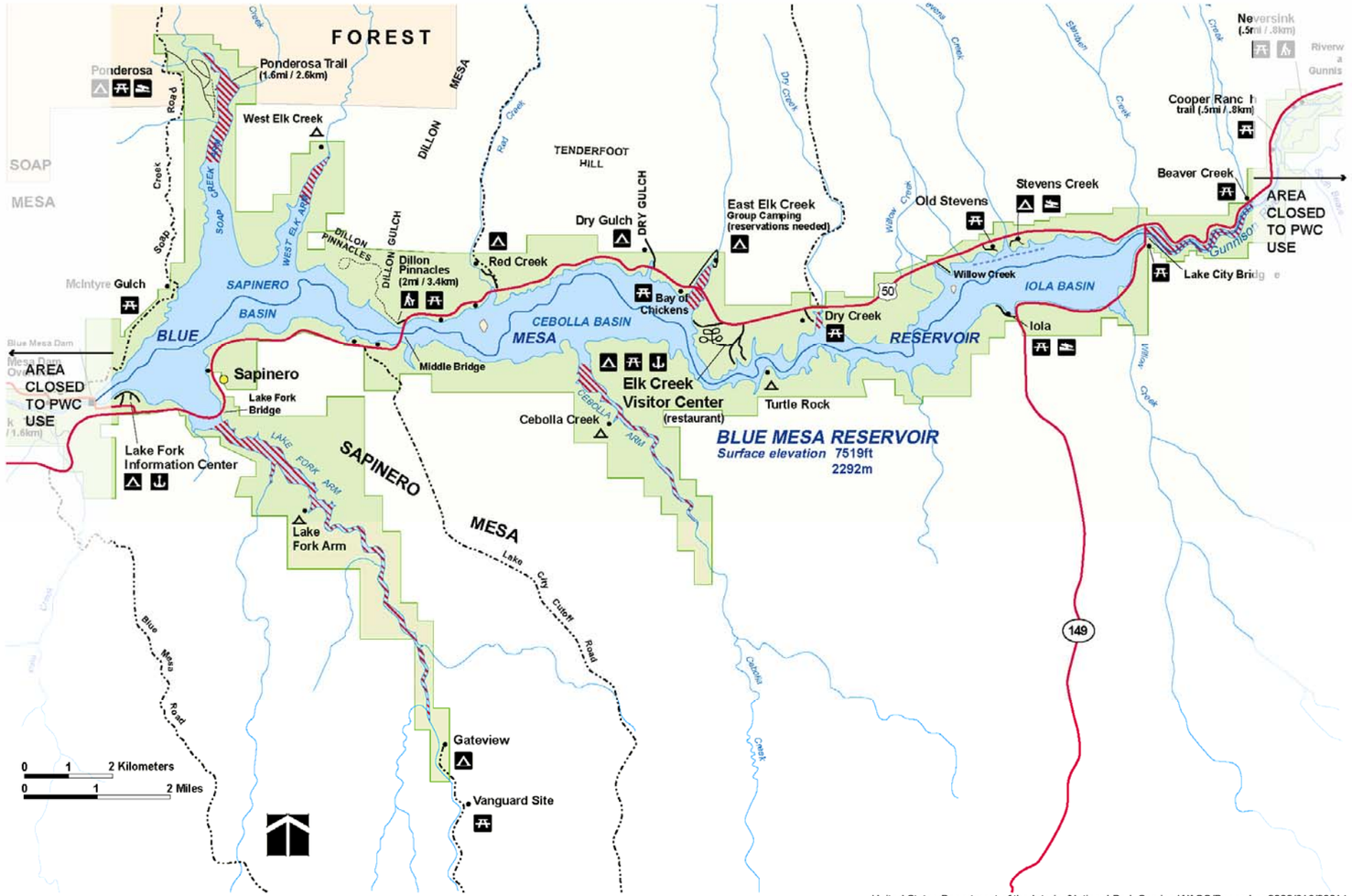
At Curecanti, the following areas would ~~remain~~ be zoned as flat-wake speed areas for all vessels:

- The area upstream from Lake City Bridge to Beaver Creek;
- The ~~most inland and narrow portions of Soap Creek Arm, West Elk Arm, Lake Fork Arm, and Cebolla Arm~~ area within the arms of Blue Mesa Reservoir that is less than 1,000 feet from shore to shore at full pool level. These areas would be marked by buoys. These arms include Soap Creek Arm, West Elk Arm, Lake Fork Arm, and Cebolla Arm;
- Narrow waterways off the Bay of Chickens and Dry Creek;
- Elk Creek and Lake Fork Marinas and Iola, Stevens Creek boat launch area.

In addition to the areas outlined above, a 100-foot buffer zone from the shoreline would be established at the Stevens Creek campground, as marked by buoys. The buffer area would be zoned as a flat-wake speed area. A buffer zone is necessary for the protection of an active Gunnison sage grouse lek and nesting area, and would mitigate potential noise impacts from PWC use and associated shoreline use during the lek and nesting season (mid-March to July).

Education. A voluntary user education program would be established and include interpretive talks, on-site bulletins, brochures to PWC registrants, and visitors who rent personal watercraft.

Replace map of alternative A on page 31 with the map on the following page:



Curecanti National Recreation Area
Colorado

Alternative A:
Reinstate PWC
Use under a Special Regulation as Previously Managed <u>with Additional Modifications (Preferred Alternative)</u>

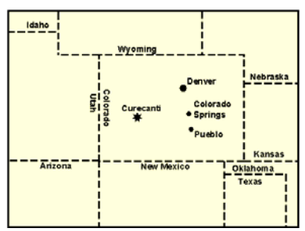
Use would continue in the flat water areas of Blue Mesa Reservoir and portions of the lake arms as prescribed in the general management plan and the Superintendent's Compendium, with the additional flat wake zones in the lake arms shown in this figure.

LEGEND

- Unpaved road (may be closed in winter)
- Former river channel
- Land
- Flat wake zone
- Overlook
- Hiking trail (lengths listed are one-way)
- Buffer zone
- Speed restrictions
- Picnic area
- Campground
- Boat launch
- Boat-In campsite
- Interpretive trail
- Marina

United States Department of the Interior/National Park Service WASO/December 2002/616/20014

VICINITY



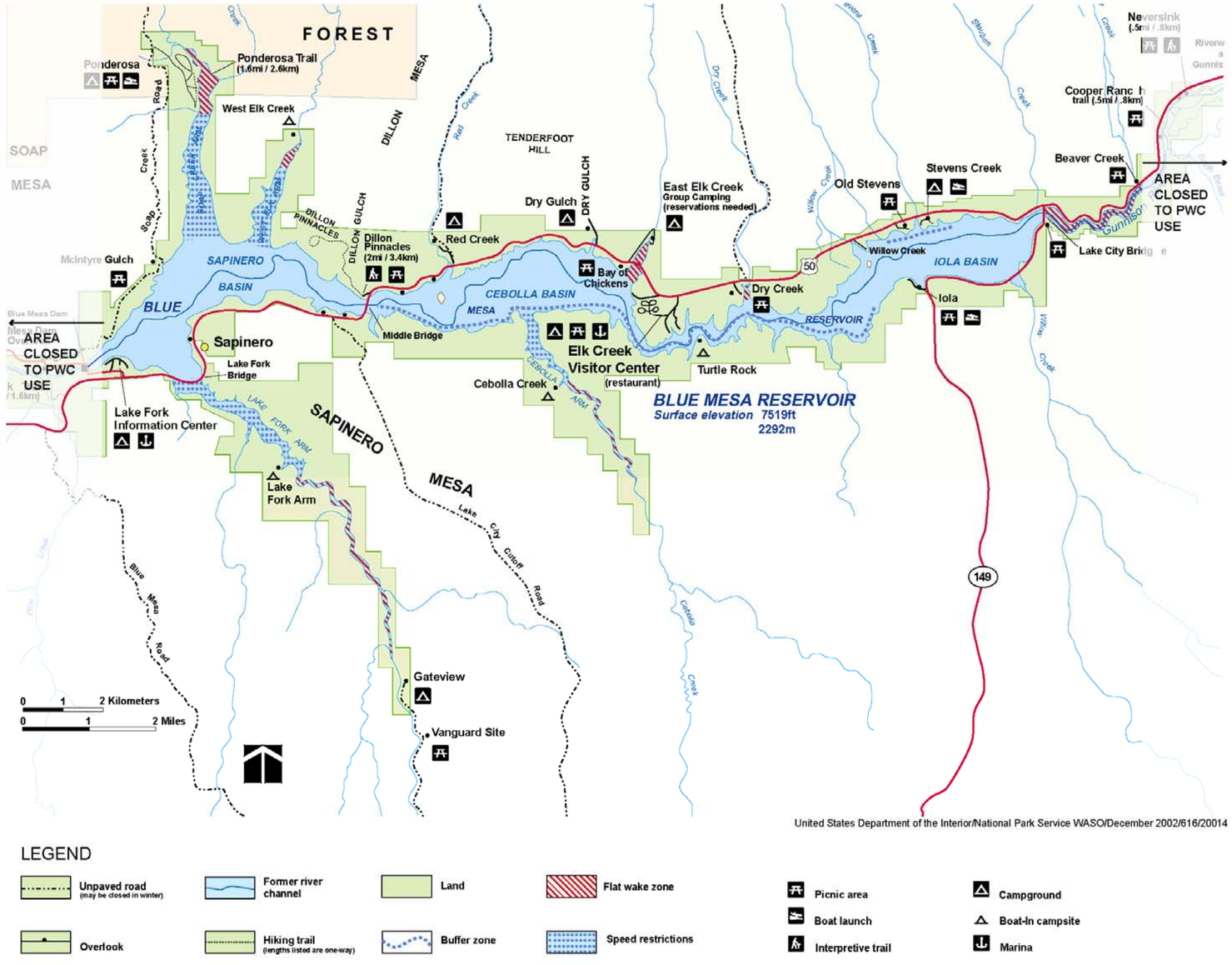
ALTERNATIVE B: REINSTATE PWC USE UNDER A SPECIAL REGULATION WITH ADDITIONAL MANAGEMENT PRESCRIPTIONS ~~(PREFERRED ALTERNATIVE)~~

The launch restrictions, operating restrictions, and engine conversion assumptions for personal watercraft would be the same as described under alternative A. In addition, the following management actions would be implemented under this alternative.

Areas of Use. As in alternative A**,** PWC use would be reinstated in all locations of the recreation area where it was allowed until November 6, 2002. ~~In addition to the areas of use outlined in alternative A, a 100-foot buffer zone would be created along the south shore of Blue Mesa Reservoir that stretches from 0.5 mile west of Iola to 0.5 mile east of Middle Bridge for soundscape, cultural resource, and wildlife protection as well as to prevent erosion. A second 100-foot buffer zone would be established at the Stevens Creek campground for the protection of an active Gunnison sage grouse lek and nesting area. A buffer zone would mitigate potential noise impacts from PWC use and associated shoreline use during the lek and nesting season (mid-March – July). Buffer areas would be zoned as flat-wake speed areas (map 3).~~

Speed Zone and Wake Restrictions. In addition to the areas of use outlined in alternative A, a 100-foot buffer zone would be created along the south shore of Blue Mesa Reservoir that stretches from 0.5 mile west of Iola to 0.5 mile east of Middle Bridge for soundscape, cultural resource, and wildlife protection as well as to prevent erosion. Another 100-foot buffer zone would be established at the Stevens Creek campground for the protection of an active Gunnison sage grouse lek and nesting area. A buffer zone would mitigate potential noise impacts from PWC use and associated shoreline use during the lek and nesting season (mid-March – July). Buffer areas would be zoned as flat-wake speed areas (map 3). Flat-wake speed zones would be established from this point upriver to river inlet. In addition to the speed zones outlined in alternative A, areas from the mouth of the lake arms on Blue Mesa Reservoir upriver to the point where noise or speed impacts visitor safety, wildlife, or soundscapes would be managed for no-wake or idle speeds within 150 feet of another boat, a person in or floating on the water, a water skier (except those being towed), shore fisherman, a launching ramp, a dock or a designated swimming area. A 100-foot buffer zone would be created along the south shore of Blue Mesa Reservoir that stretches from 0.5 mile west of Iola to 0.5 mile east of Middle Bridge for soundscapes, cultural resource, and wildlife protection as well as to prevent erosion.

Replace map of alternative B on page 33 with the map on the following page:



United States Department of the Interior/National Park Service WASO/December 2002/616/20014

LEGEND

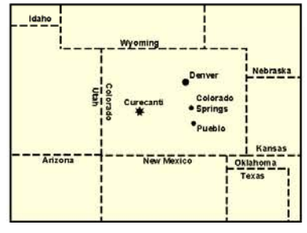
- Unpaved road (may be closed in winter)
- Former river channel
- Land
- Flat wake zone
- Overlook
- Hiking trail (lengths listed are one-way)
- Buffer zone
- Speed restrictions
- Picnic area
- Campground
- Boat launch
- Boat-In campsite
- Interpretive trail
- Marina

Curecanti National Recreation Area
Colorado

Alternative B:
Reinstate PWC Use under a Special Regulation with Additional Management Prescriptions
(~~Preferred Alternative~~)

Same as alternative A, with 100-foot buffer zone along south shore of the main lake body, ~~100-foot buffer zone along northern shore of main body,~~ and speed restriction zones from mouth of lake arms.

VICINITY



Text changes on page 37:

TABLE 3: SUMMARY OF ALTERNATIVES

Elements	Alternative A: Reinstate PWC Use under a Special Regulation as Previously Managed with Additional Modifications (Preferred Alternative)	Alternative B: Reinstate PWC Use under a Special Regulation with Additional Management Prescriptions ~~(Preferred Alternative)~~	No-Action Alternative: Allow No PWC Use
Areas of Use			
	Reinstate PWC use in areas of Blue Mesa Reservoir and portions of lake arms. Locations where allowed include Sapinero, Cebolla and Iola Basins; Bay of Chickens; Dry Creek; Elk Creek; the Highway 149 area; Soap Creek, Lake Fork, and West Elk arms.	Reinstate PWC use in same locations as alternative A.	No PWC use.
Location Restrictions	No motorized vessel operation east of Beaver Creek and downstream from East Portal diversion dam, Blue Mesa Dam downstream 225 yards and upstream 500 yards, Morrow Point Dam downstream 130 yards, Crystal Dam downstream 700 yards, and East Portal upstream 60 yards. Horsepower limitations (25 hp) remain in Morrow Point and Crystal Reservoirs.	~~In addition to alternative A restrictions, 100-foot buffer along south shore from 0.5 mile west of Iola to 0.5 mile east of Middle Bridge, and 100-foot buffer along north shore of main body at Stevens Creek.~~ Same as alternative A.	No PWC use.
Speed Zone and Wake Restrictions			
	The ~~most inland and narrow portions of Soap Creek, Lake Fork, West Elk and Cebolla arm, and~~ narrow waterways off the Bay of Chickens and Dry Creek~~,~~ would remain as flat-wake speed areas. The area within the arms of Blue Mesa Reservoir, including Soap Creek, Lake Fork, West Elk and Cebolla arm, that is less than 1,000 feet from shore to shore at full pool level would become flat-wake speed areas. The area upstream from Lake City Bridge to Beaver Creek would remain a flat-wake speed area in addition to the Elk Creek, Lake Fork, Iola, and Stevens Creek boat launch areas. A 100-foot buffer along north shore of main body at Stevens Creek would be zoned for flat-wake speed. The state of Colorado regulations allow motorized vessels such as personal watercraft to operate at speeds up to 40 mph, except where restricted.	In addition to alternative A restrictions, from mouth of the lake arms upriver to the point where noise or speed impact visitor safety, wildlife or soundscapes would be managed for wakeless or idle speeds. Flat-wake zone from this point upriver to inlet. A 100-foot buffer along south shore from 0.5 mile west of Iola to 0.5 mile east of Middle Bridge, and 100-foot buffer along north shore of main body at Stevens Creek. Buffer zones would be zoned for flat-wake speed.	No PWC use.
Launch Restrictions			
	All designated launch areas on Blue Mesa (developed and unimproved) remain open to PWC use. 100-ft buffer on northern shore of main body at Stevens Creek.	In addition to alternative A restrictions, 100-ft buffer south shore main body from 0.5 mile west of Iola to 0.5 mile east of Middle Bridge. 100-ft buffer on northern shore of main body at Stevens Creek.	No PWC launching or retrieval permitted.

Text changes on page 40:

TABLE 4: SUMMARY OF ENVIRONMENTAL CONSEQUENCES

Impact Topic	Alternative A: Reinstate PWC Use under a Special Regulation as Previously Managed with Additional Modifications (Preferred Alternative)	Alternative B: Reinstate PWC Use under a Special Regulation with Additional Management Prescriptions ~~(Preferred Alternative)~~	No- Action Alternative: Allow No PWC Use
Wildlife and Wildlife Habitat	PWC use impacts: ~~Negligible~~ Minor adverse effects on fish, and ~~negligible to~~ minor to moderate impacts on waterfowl and other wildlife. Impacts to fish, wildlife and respective habitats would be temporary and short term. Cumulative impacts: ~~Minor~~ Moderate adverse effects on wildlife and wildlife habitat would be temporary and short term.	PWC use impacts: Similar to alternative A except additional limitations on PWC use would slightly reduce impacts on wildlife. Expanded wake restrictions would result in a beneficial impact. Cumulative impacts: Same as alternative A.	PWC use impacts: Beneficial impact with elimination of interactions between PWC users and wildlife with potential increased use of these areas by wildlife and waterfowl. Cumulative impacts: Similar to alternative A except no PWC contribution to overall impacts to wildlife and wildlife habitat.

Text changes on pages 45-47:

TABLE 5: ANALYSIS OF HOW ALTERNATIVES MEET OBJECTIVES

Issue	Objective	Alternative A: Reinstate PWC Use under a Special Regulation as Previously Managed with Additional Modifications (Preferred Alternative)	Alternative B: Reinstate PWC Use under a Special Regulation with Additional Management Prescriptions ~~(Preferred Alternative)~~	No-Action Alternative: Allow No PWC Use
Wildlife and Wildlife Habitat				
Some research suggests that PWC use impacts wildlife through interruption of normal activities, alarm or flight; avoidance and displacement of habitat; and effects on reproductive success. This is thought to be caused by a combination of PWC speed, noise and ability to access sensitive areas, especially in shallow-water depths. Literature suggests that personal watercraft can access sensitive shorelines, disrupting riparian habitat areas critical to wildlife.	Protect birds, waterfowl, and other wildlife from the effects of PWC noise.	Meets objective with areas of use ~~and flat wake~~ and the creation of flat-wake buffer zones.	Meets objective by creating flat-wake buffer zones as well as expanded monitoring of resource impacts.	Fully meets objective.

Issue	Objective	Alternative A: Reinstate PWC Use under a Special Regulation as Previously Managed with Additional Modifications (Preferred Alternative)	Alternative B: Reinstate PWC Use under a Special Regulation with Additional Management Prescriptions ~~(Preferred Alternative)~~	No-Action Alternative: Allow No PWC Use
Deer, elk and bighorn sheep occur mostly in terrestrial habitat adjacent to the lake arms. There is potential for the noise to reverberate if personal watercraft are running fast, but the lake arms have flat-wake speed restrictions to prevent these noise impacts (see *General Management Plan* [NPS 1997] for additional information). The potential exists for noise impacts on smaller wildlife such as squirrels, skunks, and porcupines that are in areas close to the reservoir.	Protect fish and wildlife including the bald eagle, great blue heron [park native species of special concern], Gunnison sage grouse [park native species of special concern and federal candidate], and their habitats from PWC disturbances.	Meets objective with areas of use ~~and flat wake~~, and the creation of flat-wake buffer zones.	Meets objective by creating flat-wake buffer zones as well as expanded monitoring of resource impacts.	Fully meets objective.
Animals also could be affected when PWC users are operating illegally in areas where flat-wake speed restrictions do apply.	Protect fish and wildlife from the adverse effects that result from the bio-accumulation of contaminants emitted from personal watercraft.	~~Meets objective because threatened and endangered species primarily occur during off-season for PWC use and potential impact is minimal.~~ Meets objective with the creation of flat-wake buffer zones.	Meets objective by creating flat-wake buffer zones as well as expanded monitoring of resource impacts, and because potential impact is minimal.	Fully meets objective.

Issue	Objective	Alternative A: Reinstate PWC Use under a Special Regulation as Previously Managed with Additional Modifications (Preferred Alternative)	Alternative B: Reinstate PWC Use under a Special Regulation with Additional Management Prescriptions ~~(Preferred Alternative)~~	No-Action Alternative: Allow No PWC Use
Threatened, Endangered, and Special Concern Species				
A variety of state and federally listed and park sensitive species are found at Curecanti. The Colorado River cutthroat trout is found in the Gunnison River, downstream of Crystal Reservoir and the Crystal Dam. The species does not occur in Sapinero, Cebolla or Iola Basins, which comprise Blue Mesa Reservoir. Water from Curecanti flows into the Gunnison River and could potentially affect the habitat of this species. However, PWC use occurs only on Blue Mesa Reservoir. Morrow Point and Crystal Reservoirs are located between Blue Mesa and the Gunnison River, providing substantial dilution for PWC pollutant emissions prior to reaching the river.	Protect threatened and endangered species, and species of special concern, and their habitats from PWC disturbances.	Meets objective because threatened and endangered species primarily occur during off-season for PWC use and potential impact is minimal. The creation of flat-wake zones would provide additional protection.	Meets objective by creating flat-wake buffer zones as well as expanded monitoring of resource impacts, and because potential impact is minimal.	Fully meets objective.
In some areas personal watercraft could cause harm to the great blue heron (park native species of special concern) and Colorado River cutthroat trout, (vulnerable state species of concern), the Gunnison sage grouse (federal candidate species), and two astragalus species, (state imperiled plants), because of the machine's operational characteristics and users' ability to access areas of species habitat.	Protect threatened and endangered species, and species of special concern, and their habitats from PWC disturbances.	Meets objective because threatened and endangered species primarily occur during off-season for PWC use and potential impact is minimal. The creation of flat-wake buffer zones would provide additional protection.	Meets objective by creating flat-wake buffer zones as well as expanded monitoring of resource impacts, and because potential impact is minimal.	Fully meets objective.

Issue	Objective	Alternative A: Reinstate PWC Use under a Special Regulation as Previously Managed with Additional Modifications (Preferred Alternative)	Alternative B: Reinstate PWC Use under a Special Regulation with Additional Management Prescriptions ~~(Preferred Alternative)~~	No-Action Alternative: Allow No PWC Use
The Gunnison sage grouse, a federal candidate species, is not a waterfowl but nests close to water at the Stevens Creek Campground. A historical lek (mating) site for the Gunnison sage grouse occurs on the south side of the highway at the Stevens Creek Campground. Lek habitat for the Gunnison sage grouse consists of open areas within sagebrush vegetation with good visibility (for predator detection) and acoustics (for transmission of male display sounds) (USFWS 2000). The great blue heron, a park native species of special concern, could be affected if visitors were engaging in illegal PWC use. Bald eagles are in the park but do not nest around the reservoir during the months when personal watercraft are in use.	Protect threatened and endangered species, and species of special concern, and their habitats from PWC disturbances.	Meets objective because threatened and endangered species primarily occur during off-season for PWC use and potential impact is minimal. The creation of flat-wake buffer zones would provide additional protection.	Meets objective by creating flat-wake buffer zones as well as expanded monitoring of resource impacts, and because potential impact is minimal.	Fully meets objective.

AFFECTED ENVIRONMENT

PARK SENSITIVE SPECIES

Comment: *Page 64, first full paragraph, second sentence: Suggest the intent of the paragraph and the sentence be clarified. We presume the two closest national parks identified are the two closest National Park Service units that provide "water-based activities," or maybe even better, "flat water-based activities." Black Canyon of the Gunnison National Park is not mentioned even though it is immediately adjacent to the CNRA and provides stream fishing—a water-based activity.*

U.S. Department of the Interior, CURE 0030, C.

Response: The text will be changed as shown below to clarify that flat water-based activities (e.g., PWC use) are the focus of the paragraph.

Text changes on page 64: Two facilities within the Colorado State park system that provide water-based activities, Crawford and Ridgeway, are located within 120 miles of Gunnison. The closest national parks to Curecanti where PWC use is possible are Glen Canyon National Recreation Area (420 miles) and Lake Mead National Recreation Area (650 miles).

ENVIRONMENTAL CONSEQUENCES

PWC AND BOATING USE TRENDS

Comment: *Ultimately, however, the NPS concludes that resumed PWC use will not impair or significantly impact the park's aquatic resources. While this conclusion is correct, it is nevertheless based on various faulty assumptions, some of which are outdated while others reflect unrealistic "worst case" conditions. The net effect is that the EA significantly inflates potential PWC emissions levels.*

For analytical purpose, the NPS assumes that 16 PWC will use the Blue Mesa Reservoir per day in 2002, increasing by two percent each year to a total volume of 20 PWC per day in 2015. Id. at 82. This assumption is not based on the average, in-season PWC volume, or even the average volume on high-use days. Instead, this figure represents the largest number of PWC observed on the two peak days of the year (Fourth of July and Labor Day). Id. Actual per-day PWC volumes are significantly less than the figures used in the NPS' water impact analysis. Id. at 68. Thus, the EA's assumption about the volume of PWC activity on the Blue Mesa Reservoir results in an overstatement of aggregate PWC emissions and exemplifies that NPS' conservative approach to regulating PWC.

Equally as important, the NPS assumes that, at least initially, all PWC in the park would have conventional carbureted two-stroke engines, which allegedly discharge 3 gallons of unburned gasoline per hour directly into the water. Id. at 82. As a result of this assumption, the EA reflects the pre-1999 emissions baseline rather that the current situation where PWC emissions have already declined significantly due to industry's ongoing conversion to cleaner engine technologies. Indeed, as demonstrated in the Chickasaw Report, emissions have been reduced by close to 25% and continue to decline rapidly.

As pointed out above, the NPS also consistently makes overly conservative assumptions when assessing PWC impacts. For example, the EA states that the concentration of benzo(a)pyrene in gasoline can be "up to 2.8 mg/kg." Id. at 148 (emphasis added). Rather than select a realistic concentration, the NPS presumes the worst and consistently employees the maximum concentrations as a constant in its water impact analyses. Just as significant, the EA assumes that 52,433 acre-feet of water will be available to dilute PWC emissions. Id. at 82. This water volume is unrealistically low and was selected to "[t]o give the most conservative estimate, id. (emphasis added), of PWC impacts. This "worst case" water volume assumption is particularly inappropriate given that the Blue Mesa Reservoir is an impounded lake whose water levels may be controlled. Id. at 51.

Correcting these faulty assumptions will lead to lower (and more accurate) estimates of PWC and cumulative emissions. These estimates would, in turn, further corroborate the EA's conclusion that PWC use will not impair or significantly impact human health or aquatic resources. Furthermore, to the extent that the NPS intends under Alternative B to monitor PWC impacts on water quality, the current objective data presented in these joint comments show that such monitoring is unnecessary. The ongoing reduction of PWC emissions, coupled with the relatively low numbers of PWC on the lake, renders PWC-specific monitoring a waste of park resources. As the EA documents, other watercraft are much more numerous and constitute a far greater threat to the park's water quality than the number of PWC that will return to the lake even under "worst case" conditions.

Personal Watercraft Industry Association, CURE 0002, K.

Response: Assumptions regarding PWC use (16 per day in 2002 and 20 per day in 2012) were based on actual count data from the month of July 2002 and on park staff observations. Because of holiday timing in 2001 and poor weather, the observation of 9 PWC on a peak-use day was thought to be more typical of a summer day, not a peak-use day. Therefore, as shown in Table 11, peak-use PWC numbers in 2002 were estimated to be 16 vessels. PWC use at other times of the year ranged from 0 to 4 PWC per day. Data for the years 2001 and 2002 were the only data available for Curecanti (EA page 75). Because data from other years were not available, trends in PWC use at Curecanti could not be determined for use in the EA. The July 2002 estimate can be considered a "worst case" estimate, but it is not "unrealistic" since it based on actual Curecanti data and park staff observations. Despite these conservative estimates, impacts to water quality from personal watercraft are judged to be negligible for all alternatives evaluated. If the assumptions used were less than conservative, the conclusions could not be considered protective of the environment, while still being within the range of expected use.

The assumption of all PWC using 2-stroke engines in 2002 is recognized as conservative. It is protective of the environment yet follows the emission data available in CARB (1998) and Bluewater Network (2001) at the time of preparation of the EA. The emission rate of 3 gallons per hour at full throttle is a mid-point between 3 gallons in two hours (1.5 gallons per hour; NPS 1999) and 3.8 to 4.5 gallons per hour for an average 2000 model year PWC (Personal Watercraft and Bluewater Network 2001). The assumption also is reasonable in view of the initiation of production line testing in 2000 (EPA 1997) and expected full implementation of testing by 2006 (EPA 1996).

Reductions in emissions used in the water quality impact assessment are in accordance with the overall hydrocarbon emission reduction projections published by the EPA (1996). EPA (1996) estimates a 52% reduction by PWC by 2010 and a 68% reduction by 2015. The 50% reduction in emissions by 2012 (the future date used in the EA) is a conservative interpolation of the emission reduction percentages and associated years (2010 and 2015) reported by the EPA (1996) but with a one-year delay in production line testing (EPA 1997).

The estimate of 2.8 mg/kg for benzo(a)pyrene in gasoline used in the calculations is considered conservative, yet realistic, since it is within the range of concentrations measured in gasoline according to Gustafson et al. (1997).

Text changes on page 75: PWC and boating use was observed and averaged by park staff between June 30, 2001 and July 8, 2001, a peak use holiday week, to derive an estimate of 3 to 9 PWC. However, because the Fourth of July fell between two weekends that year, park staff indicated that holiday weekend use was distributed over two weekends, rather than just one, reflecting less daily use than normal during a peak holiday weekend. Gasoline prices were also high during that period and the weather was cold and rainy affecting outdoor activities. Because of these factors, park staff indicated 9 PWC per day was more reflective of a typical summer day, rather than a holiday (NPS 2002d). Therefore, PWC use on a peak use day in 2002 is estimated to be 16 vessels.

WATER QUALITY

Text changes on pages 84-85:

Impacts of Alternative A: Reinstate PWC Use under a Special Regulation as Previously Managed with Additional Modifications (Preferred Alternative)

Analysis. PWC use would be reinstated within Curecanti in all locations of the recreation area where it was allowed until November 6, 2002, with some additional wake restrictions in the lake arms and near Stevens Creek campground. All designated launch areas of Blue Mesa Reservoir would remain open to PWC use. PWC would be allowed to land on any shoreline as it was allowed until November 6, 2002.

Impacts of Alternative B: Reinstate PWC Use under a Special Regulation with Additional Management Prescriptions ~~(Preferred Alternative)~~

Analysis. ~~As under alternative A,~~ PWC use would be reinstated within Curecanti in all locations of the recreation area where it was allowed until November 6, 2002, with additional restrictions.

AIR QUALITY

IMPACTS TO HUMAN HEALTH FROM AIRBORNE POLLUTANTS RELATED TO PWC USE

Text changes on pages 94-95:

Impacts of Alternative A: Reinstate PWC Use under a Special Regulation as Previously Managed with Additional Modifications (Preferred Alternative)

Analysis. Under this alternative, the use of Curecanti by PWC would be reinstated and managed under the management strategies that were in place until November 6, 2002, when the park was closed to PWC use, with some additional wake restrictions in the lake arms and near Stevens Creek campground. Based on data provided in the "PWC and Boating Use Trends" section, PWC annual use is estimated to be 792 PWC in 2002, increasing at approximately 2% annually to 965 PWC in 2012.Impacts of Alternative B: Reinstate PWC Use under a Special Regulation with Additional Management Prescriptions ~~(Preferred Alternative)~~

IMPACTS TO AIR QUALITY RELATED VALUES FROM PWC POLLUTANTS

Text changes on pages 98-99:

Impacts of Alternative A: Reinstate PWC Use under a Special Regulation as Previously Managed with Additional Modifications (Preferred Alternative)

Analysis. PWC use in Curecanti NRA would be reinstated according to management strategies in place until November 6, 2002, with some additional wake restrictions in the lake arms and near Stevens Creek campground. There would be no locational restrictions ~~or changes in speed limits~~ from

those previously enforced. As outlined in the "PWC and Boating Use Trends" section, annual use is estimated to be 792 PWC in 2002, increasing at approximately 2% annually to 965 PWC in 2012.

Impacts of Alternative B: Reinstate PWC Use under a Special Regulation with Additional Management Prescriptions ~~(Preferred Alternative)~~

SOUNDSCAPES

Text changes on pages 106-107:

Impacts of Alternative A: Reinstate PWC Use under a Special Regulation as Previously Managed with Additional Modifications (Preferred Alternative)

Impacts of Alternative B: Reinstate PWC Use under a Special Regulation with Additional Management Prescriptions ~~(Preferred Alternative)~~

WILDLIFE AND WILDLIFE HABITAT

Comment: *Moreover, we are concerned that the NPS doesn't consider a large enough area when investigating PWC noise and its impact upon wildlife. On page 109, the NPS writes that PWC may disturb wildlife along the shore, extending inland approximately 100 feet. This is in sharp contrast to the distance analyzed when considering PWC noise impacts upon humans. On page 105, the NPS states that it would take roughly ¾ of a mile to reduce the noise of a single PWC to typical background levels. Wildlife often have better hearing than humans and it is safe to assume that if humans can hear PWC noise nearly a mile from the shore, many animals will also be impacted that far from the lake. In light of this inconsistency, the NPS must revisit the DEA sections which deal with wildlife. In particular, the Park Service must examine an area at least ¾ of a mile from the shore when considering PWC noise impacts upon wildlife.*

Bluewater Network, CURE 0001, BB.

Response: As per the Draft EA (page 110), the evaluation area for noise impacts to wildlife is 200 feet, not 100 feet from the shoreline. Even within this relative short distance from PWC, noise impacts to wildlife are expected to be short-term and either minor or negligible. Noise levels from PWC use would be decreased further at greater distances. However, additional potentially affected wildlife may be present within ¾ mile of the shoreline. Therefore impact levels may increase slightly from those described for the various alternatives and wildlife categories. Impacts described as negligible will be changed to minor, impacts described as minor will be changed to moderate, and ranges of impacts from negligible to minor will be changed to minor to moderate.

Text changes on pages 111-113:

Impacts of Alternative A: Reinstate PWC Use under a Special Regulation as Previously Managed with Additional Modifications (Preferred Alternative)

Analysis. PWC use could affect wildlife wherever motorized vessels are allowed. ~~Although~~ When PWC ~~is~~ were allowed throughout the main body and arms of Blue Mesa Reservoir prior to the

November 2002 ban, use ~~is~~ was most concentrated between Elk Creek and the Lake City Bridge, and in the Soap Creek Arm. Most access ~~is~~ was from the Ponderosa Campground and the Elk Creek Marina. Due to cool ambient air and water temperatures throughout the majority of the year, PWC use ~~occurs~~ occurred from June through September with peak use during July and August. Due to heavy winds and wave action on Blue Mesa Reservoir, average time of use for PWC per day ~~is~~ was 2 hours.

Within the impact analysis area, wildlife such as waterfowl are most likely to occur near the shoreline due to habitat constraints. Some species such as small mammals may visit the shoreline often, even though their primary habitat is outside of the immediate shoreline area. Other wildlife species that occur within the recreation area occur at the shoreline only infrequently. The addition of flat-wake zoning at the Stevens Creek campground and the expanded wake restriction zones in the lake arms would decrease the likelihood of impacts to waterfowl and other species along the shoreline. In the shoreline buffer areas, noise, physical disturbance, and emissions from PWC would be decreased or eliminated. There are no documented cases of deliberate harassment or collisions with wildlife by PWC users on Blue Mesa Reservoir.

Birds – Overall, there is a lack of breeding habitat for birds within areas utilized by PWC at Curecanti. In addition, most PWC are not used in the spring at Curecanti due to low water and air temperatures, further minimizing the potential for disturbance to breeding individuals. Waterfowl would be more susceptible to PWC use than other bird species, but any impacts would be short-term, and would likely affect foraging or resting individuals. The potential exists for some impacts during brood rearing, but is unlikely due to lack of suitable habitat in areas of high PWC use. Due to a lack of breeding habitat for waterfowl and other birds in areas of PWC use at Curecanti, adverse impacts to waterfowl and associated habitat would be ~~negligible to~~ minor to moderate in the short-term.

Reptiles and Amphibians – Impacts to reptiles and amphibians are most likely to occur in locations where PWC or their users disrupt nesting or breeding sites. Such sites are not common in areas of high PWC use in Curecanti. Any adverse impacts from these activities at Curecanti under alternative A would be ~~negligible~~ minor and would be short-term and ~~minor~~ moderate at localized areas only.

Mammals – Impacts to mammals would be ~~negligible to~~ minor to moderate adverse since there is little use of the shoreline by most species. The added 100-foot buffer zone at the Stevens Creek campground would decrease the likelihood of impacts to mammals in this area. Most mammals are either transient visitors from inland, or are ~~parts of the~~ generally acclimated to human intrusion. Aquatic mammals such as beaver are mobile and avoid noise and disturbance associated with PWC use. Their breeding areas are typically in backwater areas not frequented by PWC and adverse impacts would be ~~negligible~~ minor. In addition, primary habitat areas for large mammals such as deer, elk, and bighorn sheep are in the lake arm areas away from high PWC use or where flat-wake speed restrictions are in place. ~~The most inland and narrow portions of the lake arms are zoned as flat-wake speed areas.~~ Under this alternative, the flat-wake zones in the lake arms are larger than they were prior to November 6, 2002, which would reduce impacts to mammals in these areas. Small mammals common to the area such as marmots, skunks, porcupines, and chipmunks generally acclimate easily to human activity and have the ability to avoid impacts. Therefore, any adverse impacts to these species would be ~~minor~~ moderate and short-term.

Cumulative Impacts. Potential cumulative effects to wildlife and wildlife habitat are related to various visitor activities that occur in proximity to wildlife species. Visitors have access to the shoreline by many types of non-personal watercraft, or by automobile and hiking. Non-PWC boating activities account for over 90% of total boating activity in the recreation area. Wildlife routinely exhibit movement or flight response due to disturbance by powerboats. A study in Florida showed no

substantial difference in flush distance between the rapid approach of PWC and non-PWC motorized vessels (Rodgers and Schwikert 2002).

Interactions between wildlife and human visitors would be limited because of the low abundance of wildlife within the high use areas and the dispersion of visitors along the shoreline. Shoreline use tends to be concentrated around developed facilities such as marinas, where habitat characteristics are lacking relative to undeveloped shoreline areas. Visitor interactions would not interfere with feeding, reproduction, or other activities necessary for the survival of the wildlife species. Overall, visitors (including PWC users) at Curecanti would cause ~~minor~~ moderate, short-term adverse impacts to wildlife that are dispersed over a large area along the shoreline.

Conclusion. PWC use at Curecanti would have negligible adverse effects on fish, and ~~negligible to~~ minor to moderate adverse impacts on waterfowl and other wildlife. There would be no perceptible changes in wildlife populations or their habitat community structure. Due to low levels of PWC use, coupled with a lack of substantial habitat areas, any impacts to fish, wildlife and respective habitats would be temporary and short term. The intensity and duration of impacts is not expected to increase substantially over the next 10 years, since PWC numbers would not increase substantially and engine technology would continue to improve under EPA industry regulations. On a cumulative basis, all visitor activities would have ~~minor~~ moderate adverse effects on wildlife and wildlife habitat. All wildlife impacts would be temporary and short term.

Implementation of this alternative would not result in impairment to wildlife or wildlife habitat.

Impacts of Alternative B: Reinstate PWC Use
under a Special Regulation with Additional Management Prescriptions ~~(Preferred Alternative)~~

Analysis. Under alternative B, the number of PWC users, launch restrictions, safety/operating restrictions, and emissions requirements would be the same as under alternative A. However, the added 100-foot PWC restricted buffer zone along portions of the south shore, along with expanded wake restricted zones in lake arms would decrease the likelihood of impacts to waterfowl and other species along the shoreline. In the shoreline buffer areas, noise, physical disturbance, and emissions from PWC would be decreased or eliminated. Additional speed and wake restrictions would be implemented in the lake arm and river inlet areas. The establishment of a resource monitoring program would provide a check on future increases in PWC use. The above restrictions would result in beneficial impacts to wildlife and wildlife habitat relative to alternative A. Over the next 10 years, adverse impacts would continue to be ~~negligible~~ minor since PWC numbers are not expected to increase substantially. All wildlife impacts would be temporary and short term.

Cumulative Impacts. The cumulative effects of alternative B would be essentially the same as those of alternative A as adverse impacts would be ~~negligible to~~ minor to moderate. Current and future impacts by visitors would not differ substantively between alternatives. PWC contribution to cumulative impacts would be slightly less than in alternative A.

Conclusion. Impacts to wildlife in alternative B are similar to those in alternative A, except the additional limitations on PWC use would slightly reduce impacts on wildlife. Expanded wake restrictions and resource monitoring would result in a beneficial impact. Cumulative adverse impacts would be the same as alternative A, and would be ~~negligible to~~ minor to moderate adverse due to boating activity and other visitor uses. All wildlife impacts would be temporary and short term.

Implementation of this alternative would not result in impairment to wildlife or wildlife habitat.

THREATENED, ENDANGERED, OR SPECIAL CONCERN SPECIES

Text changes on pages 116-119:

Impacts of Alternative A: Reinstate PWC Use under a Special Regulation as Previously Managed with Additional Modifications (Preferred Alternative)

Analysis. PWC use could affect threatened, endangered, or other special status wildlife wherever use occurs in close proximity to occurrences of listed species or habitat. Although PWC ~~is~~ were previously allowed throughout the main body and arms of Blue Mesa Reservoir, use ~~is~~ was most concentrated between Elk Creek and the Lake City Bridge, and in the Soap Creek Arm. Most access ~~is~~ was from the Ponderosa Campground and the Lake Fork Marina. PWC use levels are low with approximately 16 PWC users on a peak use summer day in 2002, increasing to an average of 19-20 PWC users per peak use day by 2012. Due to low water and air temperatures throughout the majority of the year, PWC use occurs from June through September with peak use during July and August. Due to heavy winds and wave action on Blue Mesa Reservoir, average time of use for PWC per day ~~is~~ was 2 hours.

Deleted: was

Animals

Federal and State Listed or Candidate Species

Gunnison sage grouse (federal candidate species). The Gunnison sage grouse is known to breed and nest within Curecanti. Visitor use areas adjacent to known Gunnison sage grouse habitats are closed to public access during the appropriate season. A historic lek site is located near the shoreline of the Stevens Creek campground where PWC use ~~occurs~~ occurred. If this site is determined to be active, through surveys being conducted by the National Park Service, the area would also be closed to public access during the mating and nesting seasons. Under alternative A, a 100-foot buffer zone would be established for the protection of an active Gunnison sage grouse lek and nesting area at Stevens Creek. This buffer area, zoned as a flat-wake speed area, would mitigate potential noise impacts from PWC use and associated shoreline use during lek and nesting season, which is mid-March to July. ~~Further buffer zones would be established in alternative B to reduce noise disturbance during the lek season since acoustics is an important part of the mating ritual. However, since PWC use is not likely to occur during the lek season, March through May 15, due to inclement weather,~~ With these additional wake restrictions, PWC use may affect, but is not likely to adversely affect, Gunnison sage grouse or its habitat.

Yellow-billed cuckoo (federal candidate for listing). Habitat for the yellow-billed cuckoo consists of old growth riparian woodlands with dense understories (Kingery 1998). At Curecanti, potential habitat for the species would only be found in the riparian areas associated with the inflow drainages where PWC use ~~is~~ would either be subject to wake restrictions or ~~is~~ would be prohibited. The yellow-billed cuckoo is designated as a non-game species within Colorado. As that designation applies, it is not legal to take, harass, or threaten the species. Documented occurrences of yellow-billed cuckoo are infrequent and consist of non-breeding summer records only (Andrews and Righter 1992, Hyde and Cook 1980). There is no evidence that the bird breeds in Gunnison County (Kingery 1998). Therefore, PWC use within Curecanti National Recreation Area may affect, but is not likely to adversely affect the yellow-billed cuckoo or its habitat.

Impacts of Alternative B: Reinstate PWC Use
under a Special Regulation with Additional Management Prescriptions ~~(Preferred Alternative)~~

SHORELINES AND SHORELINE VEGETATION

Text changes on pages 121-122:

Impacts of Alternative A: Reinstate PWC Use under a Special Regulation as Previously Managed with Additional Modifications (Preferred Alternative)

Analysis. Reinstated PWC use could affect vegetation in areas between Elk Creek and the Lake City Bridge and in the Soap Creek Arm where visitor use and shoreline access is concentrated. Potential impacts to vegetation from PWC use include short-term wave action and trampling as a result of PWC operators accessing and walking on the shore. Because vegetation is generally lacking along many shoreline areas, PWC use would result in only negligible, short-term adverse impacts. The primary location of lush riparian vegetation is in more inland and narrow areas of the lake arms. However, the expanded ~~these areas would be~~ designated flat-wake speed areas in the lake arms would ~~to~~ minimize disturbance from PWC and other activities. Thus, adverse impacts to vegetation would be negligible in the lake arms as well.

VISITOR USE AND EXPERIENCE

Text changes on pages 125-127:

Impacts of Alternative A: Reinstate PWC Use under a Special Regulation as Previously Managed with Additional Modifications (Preferred Alternative)

Analysis. PWC operators under alternative A would have unrestricted use along the Blue Mesa Reservoir shoreline within the impact analysis area, as allowed prior to the November 6, 2002 ban. ~~with use~~ Use would increase ~~increasing~~ from 9 personal watercraft per typical summer season day to 11 PWC per day by 2012. Peak use days would increase from 16 to 20 PWC per day, based on an increase of 2% per year.

Impact on PWC Users — ~~There would be no change~~ There would be minimal changes to PWC use or activity as compared to conditions prior to the 2002 PWC closure. The flat-wake zone near Stevens Creek campground would have a negligible adverse impact on PWC users, since this area is not a high-use area for PWC. The boat ramp at Stevens Creek would remain zoned as flat-wake. The flat-wake zones within the portion of the arms of the lake that is less than 1,000 feet from shore to shore would have a minor adverse impact on PWC users, as these calmer, narrow, areas of the reservoir would not be available for any high speed use.

Impact on Other Boaters — Other boaters at Curecanti National Recreation Area would interact with PWC operators on an increasing basis as overall boating numbers increase over the next 10 years. PWC use is expected to increase at a slightly higher rate then other boat use; however, PWC would still only comprise approximately 7% of total boats on Blue Mesa Reservoir in 2012. The main body of Blue Mesa Reservoir does not receive substantial PWC use due to the large expanses of open water

and frequent high winds. High-use areas for PWC include Dry Creek, the Soap Creek Arm, Bay of Chickens, near the marinas, and off Highway 149 just south of the Lake City Bridge.

Generally, few non-motorized craft (sea kayaks, canoes, and windsurfers) use Blue Mesa Reservoir, so interactions with these user groups would be infrequent. In addition, flat-wake speed areas would occur ~~on the most inland and narrow portions of~~ within the arms of the lake, including Soap Creek Arm, West Elk Arm, Lake Fork Arm, Cebolla Arm; the narrow waterways off the Bay of Chickens and Dry Creek; and upstream of the Lake City Bridge – calmer waters that lead to creeks favored by canoeists and kayakers. Flat-wake areas would exist at Elk Creek and Lake Fork Marinas, and Iola, Stevens Creek and Old Stevens boat ramps. However, it should be noted that the main violation by PWC users has historically been violation of flat-wake speed zones, and increased PWC numbers could have an effect on non-motorized boaters at these sites. Some PWC activity exists near the windsurfing beach, but staff observations note that windsurfing activity has been steadily declining over the past few years. Therefore, under alternative A, impacts to non-motorized boaters would be negligible to minor adverse.

Impact on Other Visitors — There are four campgrounds on the reservoir that have boat launch facilities, and thus have PWC use in the vicinity. Receding lake levels have led to decreased visitation at park campgrounds, and because campgrounds are currently high above the reservoir level, contact between campers and PWC users is low. However, lake levels could rise, camping visitation could increase, and contact between the two user groups could also increase. The 100-foot flat-wake zone at the Stevens Creek campground would reduce noise impacts from PWC on campers. Under alternative A, PWC use would have negligible to minor adverse effects on visitors to park campgrounds and minor adverse effects at higher water levels when campgrounds are more accessible from the water.

Impacts of Alternative B: Reinstate PWC Use under a Special Regulation with Additional Management Prescriptions ~~(Preferred Alternative)~~

VISITOR CONFLICTS AND SAFETY

Text changes on pages 132-133:

Impacts of Alternative A: Reinstate PWC Use under a Special Regulation as Previously Managed with Additional Modifications (Preferred Alternative)

Analysis. PWC operators under alternative A would have unrestricted use along the Blue Mesa Reservoir shoreline within the impact analysis area, as allowed prior to the November 6, 2002 ban. ~~with use~~ Use would increase ~~increasing~~ from 9 personal watercraft per typical summer season day to 11 PWC per day by 2012. Peak use days would see an increase from 16 to 20 PWC per day, based on an increase of 2% per year.

Personal Watercraft/Swimmer Conflicts — The park has established flat-wake speed zones to help protect visitors, including the area around Stevens Creek campground and the area within the arms of the lake that is less than 1,000 feet from shore to shore at full pool level. ~~but~~ However, violations do occur in these areas, and historically, PWC operators are more likely to infringe on the flat-wake speed rule than other vessel operators. An estimated 16–20 personal watercraft would be operated in the reservoir during peak use days, many of which would likely concentrate near popular swim areas and may violate the flat-wake speed rule to beach, pick up passengers, or change operators. Even though no PWC related accidents have occurred involving a swimmer, the park has received complaints from

swimmers about PWC not slowing down as required in the presence of swimmers. PWC users may operate at speeds of up to 40 mph on the reservoir, and the potential exists for an accident involving a swimmer. Due to the concentration of visitors that use these areas, impacts regarding swimmer safety at these locations are predicted to be minor to moderate adverse.

Impacts of Alternative B: Reinstate PWC Use under a Special Regulation with Additional Management Prescriptions ~~(Preferred Alternative)~~

CULTURAL RESOURCES

Text changes on page 137:

Impacts of Alternative A: Reinstate PWC Use under a Special Regulation as Previously Managed with Additional Modifications (Preferred Alternative)

Continuing PWC use under a special regulation is not expected to negatively affect the overall condition of cultural resources because project-by-project inventories and mitigation would still be conducted. Creation or extension of flat-wake speed zones near Stevens Creek and in the lake arms would reduce wave action and could have a long-term beneficial impact on listed or potentially listed archeological sites. However, without a systematic monitoring program and given the potential access concerns, there would be a risk of some unavoidable adverse impacts.

Impacts of Alternative B: Reinstate PWC Use under a Special Regulation with Additional Management Prescriptions ~~(Preferred Alternative)~~

NATIONAL RECREATION AREA MANAGEMENT AND OPERATIONS

Text changes on pages 142-143:

Impacts of Alternative A: Reinstate PWC Use under a Special Regulation as Previously Managed with Additional Modifications (Preferred Alternative)

Impacts of Alternative B: Reinstate PWC Use under a Special Regulation with Additional Management Prescriptions ~~(Preferred Alternative)~~

IMPACTS TO PARK OPERATIONS FROM INCREASED ENFORCEMENT NEEDS

Text changes on page 144:

Impacts of Alternative A: Reinstate PWC Use under a Special Regulation as Previously Managed with Additional Modifications (Preferred Alternative)

Impacts of Alternative B: Reinstate PWC Use under a Special Regulation with Additional Management Prescriptions ~~(Preferred Alternative)~~